

ABSTRACT

The decorative item of the invention comprises a basis material having at its surface a hardened layer, such as a carburized layer, and, superimposed on the basis material surface, a hard coating of carbon, TiN, TiC or the like. This decorative item is excellent in scratch resistance. Further, the decorative item of the invention may have a gold alloy coating superimposed on an entire surface or part of surface of the hard coating. This decorative item can exhibit golden color or other various tones without detriment to the excellent scratch resistance to have enhanced ornamental value. The process for producing a decorative item according to the invention enables obtaining the above decorative item, for example, an exterior part of timepiece with high productivity.

The exterior part of timepiece according to the invention has a carburized layer provided at a surface of stainless steel. The carburized layer surface is polished or machined and has a Vickers hardness of 500 or greater. This exterior part of timepiece is excellent in scratch resistance without detriment to the inherent excellent corrosion resistance of stainless steel, especially austenitic stainless steel.

25 The process for producing an exterior part of timepiece

according to the invention enables providing the above exterior part of timepiece, for example, a wristwatch band.

Another form of exterior part of timepiece 5 according to the invention comprises a metal, the metal having at its surface a deformed layer containing a fibrous structure wherein metal crystal grains are deformed so as to be fibrous, at least the deformed layer having a hardened layer wherein a solute atom is 10 diffused so as to form a solid solution. This exterior part of timepiece has a smooth or specular surface free of "orange peel" and is thus excellent in appearance. The process for producing another exterior part of timepiece according to the invention enables providing 15 the above other exterior part of timepiece according to the invention.

TOP SECRET - 1973

(12) 特許協力条約に基づいて公開された国際出願

(19) 世界知的所有権機関
国際事務局



(43) 国際公開日
2001年3月15日 (15.03.2001)

PCT

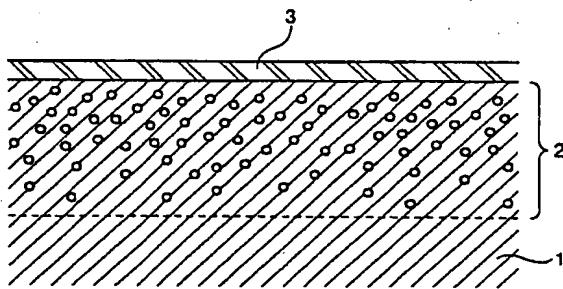
(10) 国際公開番号
WO 01/18275 A1

(51) 国際特許分類: C23C 8/20, 8/24, A44C 27/00
(52) 国際出願番号: PCT/JP00/06086
(53) 国際出願日: 2000年9月7日 (07.09.2000)
(54) 国際出願の言語: 日本語
(55) 国際公開の言語: 日本語
(56) 優先権データ:
特願平11/252900 1999年9月7日 (07.09.1999) JP
特願平11/319437 1999年11月10日 (10.11.1999) JP
特願2000/104454 2000年4月6日 (06.04.2000) JP
(71) 出願人(米国を除く全ての指定国について): シチズン時計株式会社 (CITIZEN WATCH CO., LTD.) [JP/JP];
(72) 発明者; および
(73) 発明者/出願人(米国についてのみ): 串田八郎 (KUSHIDA, Hachiro) [JP/JP]; 花井賢司 (HANAI, Kenji) [JP/JP]; 安藤益嗣 (ANDOU, Yoshitugu) [JP/JP]; 井上 健 (INOUE, Takeshi) [JP/JP]; 游野一己 (HAMANO, Kazumi) [JP/JP]; 田野倉幸夫 (TANOKURA, Yukio) [JP/JP]; 目黒 昭 (MEGURO, Akira) [JP/JP]; 〒188-8511 東京都田無市本町6丁目1番12号 シチズン時計株式会社 田無製造所内 Tokyo (JP); 池田信二 (IKEEDA, Shinji) [JP/JP]; 〒024-0002 岩手県北上市北工業団地2番25号 上尾精密株式会社内 Iwate (JP).

[続葉有]

(54) Title: ORNAMENT AND METHOD FOR PREPARATION THEREOF

(54) 発明の名称: 装飾品およびその製造方法



(57) Abstract: An ornament, such as external ornamental parts of a watch, which comprises a substrate comprising stainless steel, titanium or titanium alloy and having a hardened layer comprising a solid solution of at least one type of atom selected from the group consisting of a carbon atom, a nitrogen atom and oxygen atom in the substrate and, formed on the surface of the hardened layer, a hard coating film such as TiC or TiN. The ornament has excellent resistance to scratching without detriment to the corrosion-resistant property of the substrate and can have a variety of colors such as gold, and thus is significantly valuable from an ornamental point of view.

(57) 要約:

本発明に係る時計外装部品等の装飾品は、ステンレス鋼、チタンあるいはチタン合金からなる基体が、炭素原子、窒素原子、及び酸素原子からなる群から選ばれる少なくとも1種の原子の固溶された硬化層を有し、その硬化層表面にTiC、TiN等の硬質皮膜を形成してなるものであり、基材の有する耐食性を損なうことなく、優れた耐傷付き性を有し、しかも金色等の様々な色調を有する装飾的価値のあるものである。

WO 01/18275 A1